

ABOUT LIBERTY

- Liberty Utilities is a diversified energy and water company and a global leader in renewable generation.
- Liberty Utilities's parent company is Algonquin Power & Utilities Corp.



Regulated Service Group



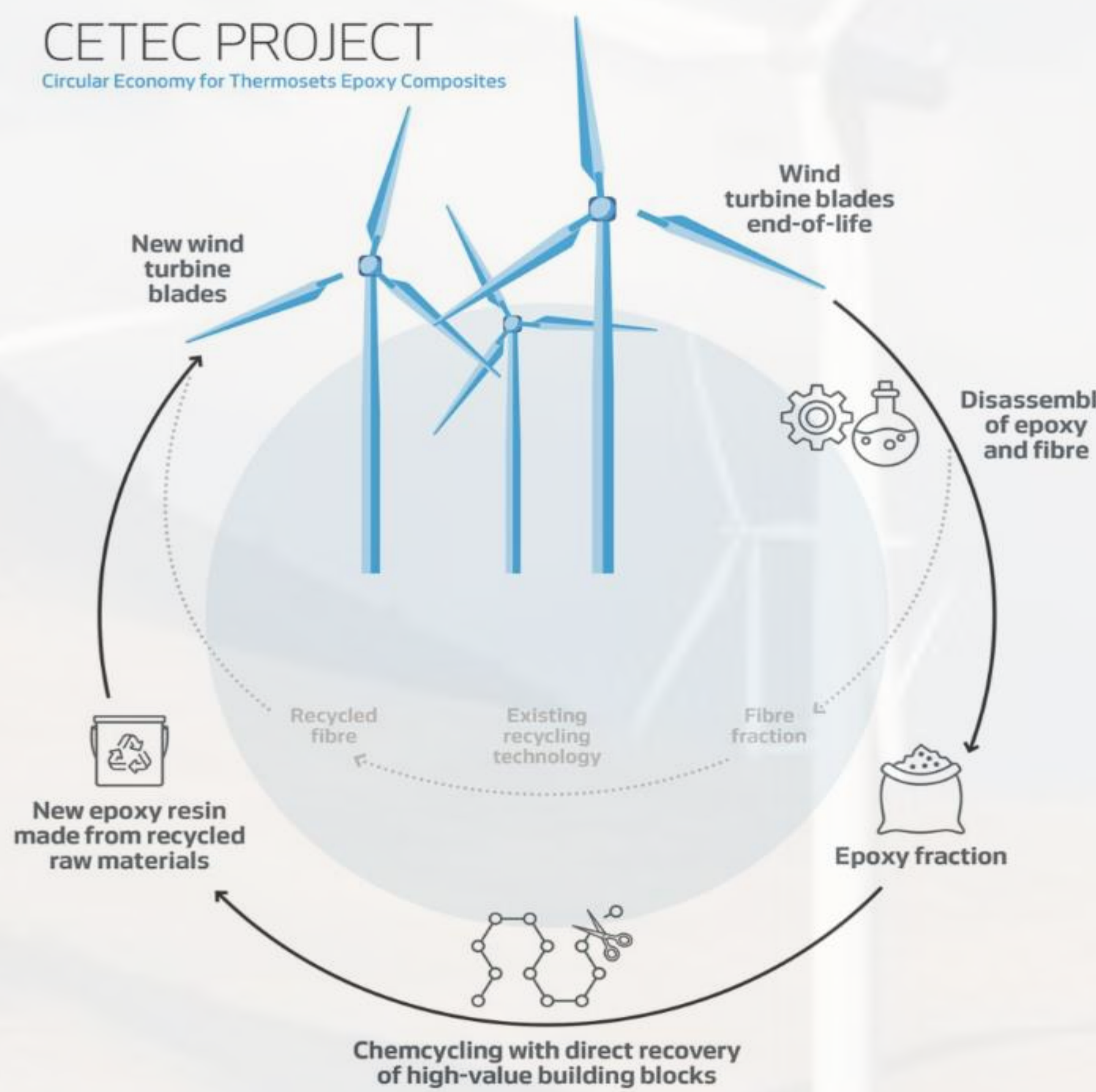
Renewable Energy Group

KEY RESPONSIBILITIES

- Lead and support various **solar & wind procurement RFPs** (Request for Proposal), including vendor communication, contract management and negotiation.
- Research on **sustainability of solar and wind energy**, supply chain impact, and industry best practices. Mainly focus on recyclability and circularity of wind turbines.
- Work with the Sustainability Office on the vendor **sustainability survey**.
- Develop an interactive excel-based tool for **estimating potential solar and wind project costs**.
- Research on solar & wind energy **raw materials and freight pricing** and market trends.

SUSTAINABILITY OF WIND TURBINES

- WTG (Wind Turbine Generators) is **85% recyclable** now, with blades recyclability to tackle
- **Blade recycling technology exists!**
- **But it's cheaper to dispose in landfill** since:
 - Lack of regulatory pressure
 - Market incentives
- The **Sustainable Blade Waste Management Hierarchy** is shown on the right.



- Market leaders such as Vestas have committed to **WTG circularity** as a part of their Net Zero strategy.

MAIN PROJECTS & INITIATIVES

- **Wind & solar projects**: was responsible for communicating, selecting, and negotiating with 15+ vendors on various utility-size rooftop and ground-mount solar and wind projects.
- **Renewable natural gas**: initiated and completed initial RFP.
- Integrated **sustainability considerations** in vendor selection process.

DO YOU KNOW?

Policy

- **Antidumping and Countervailing Duties (AD/CVD) on Solar Imports from Southeast Asia** has created worrisome uncertainties and set back solar energy development.

Technology

- The rotor diameter of wind turbines is **127.5 meters** in 2021 (418 feet), grown 600% since 1998-1999.

Reliability

- **Battery Energy Storage Systems (BESS)** is forecasted to grow at **16%** annually in the next 8 years due to burgeoning demand in solar energy development

Affordability

- Despite the recent disruptions in the global supply chain, solar PV capital cost has **decreased by over 85%** since 1995.

KEY TAKEAWAYS

- The renewable energy industry has a **very bright future**, driven by strong demand in green energy transition to combat climate change.
- The transition requires **collaboration** between businesses, all levels of governments, the scientific communities, as well as individuals.
- We also need to **address the impact** of the renewable energy supply chain on the environment and the communities.